

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A telescopic shaft constructed by fitting a male shaft and a female shaft to each other so as to be capable of transmitting torque therebetween and moving axially relative to each other, said telescopic shaft comprising:

a first torque transferring member interposed via an elastic member between a pair of axis-directional grooves formed respectively on an outer peripheral surface of said male shaft and an inner peripheral surface of said female shaft; and

said elastic member including:

a transferring-member-side contact portion abutting on said first torque transferring member;

a shaft-side contact portion spaced away at a predetermined interval from said transferring-member-side contact portion and abutting on said male shaft or said female shaft; and

a biasing portion elastically biasing said transferring-member-side contact portion and said shaft-side contact portion away from each other,

wherein a rigidity of said transferring-member-side contact portion is higher than that of said shaft-side contact portion or of said biasing portion.

2. (Cancelled).

3. (Previously Presented) A telescopic shaft according to claim 1, wherein said biasing portion of said elastic member takes a bent shape bent between said transferring-member-side contact portion and said shaft-side contact portion.

4. (Currently Amended) A telescopic shaft according to claim 1, wherein said elastic member is constructed of an integral molding product made from ~~thin~~-plate spring steel.

5. (Previously Presented) A telescopic shaft according to claim 1, wherein a surface hardness of said transferring-member-side contact portion is set higher than a surface hardness of a portion extending from said shaft-side contact portion to said biasing portion.

6. (Previously Presented) A telescopic shaft according to claim 1, wherein said biasing portion is formed with holes for reducing a biasing force.

7. (Previously Presented) A telescopic shaft according to claim 1, wherein a plate thickness of said transferring-member-side contact portion is set thicker than a plate thickness of a portion extending from said shaft-side contact portion to said biasing portion.

8. (Previously Presented) A telescopic shaft according to claim 1, wherein said transferring-member-side contact portion has a contact surface formed substantially in a circular arch cross-sectional shape.

9. (Previously Presented) A telescopic shaft for vehicle steering, comprising:

a male shaft formed with first and second axis-directional grooves extending in an axis-direction on an outer peripheral surface at an interval of a predetermined angle;

a female shaft disposed coaxially with said male shaft, formed with third and fourth axis-directional grooves

extending in the axis-direction on an inner peripheral surface in correspondence with said first and second axis-directional grooves, and fitted onto said male shaft;

a first torque transferring member interposed between said first axis-directional groove of said male shaft and said third axis-directional groove of said female shaft;

an elastic member interposed between said first torque transferring member and said first axis-directional groove of said male shaft, and extending in the axis-direction; and

a second torque transferring member interposed between said second axis-directional groove of said male shaft and said fourth axis-directional groove of said female shaft;

said telescopic shaft being assembled in a steering shaft of a vehicle and constructed by fitting said male shaft and said female shaft to each other so as to be capable of transmitting torque therebetween and moving axially relative to each other,

wherein said elastic member is integrally formed with a first contact portion at which the elastic member is in contact with said first torque transferring member, a second contact portion at which said elastic member is in contact with said groove surface of the male shaft, and a biasing portion which connects said first and second contact portions and elastically holds said first and second contact

portions to be spaced apart from each other so as to apply a preload via said first and the second contacting portions, and

the preload caused by said biasing member is so set not to exceed a tolerance value of a surface pressure at said first contact portion against said first torque transferring member.

10. (Previously Presented) A telescopic shaft for vehicle steering according to claim 9, wherein said first axis-directional groove of said male shaft has side surfaces exhibiting a line symmetry with respect to a diametrical direction and a bottom surface connecting said side surfaces,

said first contact portion of said elastic member includes transferring-member-side contact portions each abutting on said first torque transferring member,

said second contact portion of said elastic member includes groove-surface-side contact portions each abutting on one of said groove side surfaces,

said biasing portion connecting each said transferring-member-side contact portion to a corresponding one of said groove-surface-side contact portions on a side of an outer diameter, and biasing each said transferring-member-side

contact portion and the corresponding groove-surface-side contact portion away from each other, and

said elastic member integrally has a connecting portion connecting each said transferring-member-side contact portion to a groove-bottom-surface side contact portion of said elastic member on a side of an inner diameter.

11. (Previously Presented) A telescopic shaft for vehicle steering according to claim 9, wherein said first torque transferring member is constructed of a plurality of spherical rolling members, and

said second torque transferring member is constructed of a needle roller.

Claims 12-17. (Cancelled).

18. (Previously Presented) A telescopic shaft for vehicle steering according to claim 10, wherein said first torque transferring member is constructed of a plurality of spherical rolling members, and

said second torque transferring member is constructed of a needle roller.

19. (Previously Presented) A telescopic shaft according to claim 1, further comprising a second torque transferring member interposed between another pair of axis-directional grooves formed respectively on the outer peripheral surface of said male shaft and the inner peripheral surface of said female shaft.

20. (Previously Presented) A telescopic shaft according to claim 19, wherein a surface hardness of said transferring-member-side contact portion is set higher than a surface hardness of a portion extending from said shaft-side contact portion to said biasing portion.

21. (Previously Presented) A telescopic shaft according to claim 19, wherein said biasing portion is formed with holes for reducing a biasing force.

22. (Previously Presented) A telescopic shaft according to claim 19, wherein a plate thickness of said transferring-member-side contact portion is set thicker than a plate thickness of a portion extending from said shaft-side contact portion to said biasing portion.

23. (Previously Presented) A telescopic shaft according to claim 19, wherein said transferring-member-side contact portion has a contact surface formed substantially in a circular arch cross-sectional shape.

24. (Previously Presented) A telescopic shaft according to claim 19, wherein said telescopic shaft is used for vehicle steering.

25. (Cancelled).

26. (Previously Presented) A telescopic shaft according to claim 3, wherein a surface hardness of said transferring-member-side contact portion is set higher than a surface hardness of a portion extending from said shaft-side contact portion to said biasing portion.

27. (Previously Presented) A telescopic shaft according to claim 3, wherein said biasing portion is formed with holes for reducing a biasing force.

28. (Previously Presented) A telescopic shaft according to claim 3, wherein a plate thickness of said transferring-member-side contact portion is set thicker than



a plate thickness of a portion extending from said shaft-side contact portion to said biasing portion.

29. (Previously Presented) A telescopic shaft according to claim 3, wherein said transferring-member-side contact portion has a contact surface formed substantially in a circular arch cross-sectional shape.

30. (Previously Presented) A telescopic shaft according to claim 3, wherein said telescopic shaft is used for vehicle steering.

31. (Previously Presented) A telescopic shaft according to claim 1, wherein said telescopic shaft is used for vehicle steering.

32. (New) A telescopic shaft according to claim 19, wherein said first torque transferring member is a rolling member rolling when said male shaft and said female shaft make relative axial movements, and

said second torque transferring member is a slide member sliding when said male shaft and said female shaft make the relative axial movements.

33. (New) A telescopic shaft according to claim 32, wherein said biasing portion of said elastic member takes a bent shape bent between said transferring-member-side contact portion and said shaft-side contact portion.

34. (New) A telescopic shaft according to claim 32, wherein said elastic member is constructed of an integral molding product made from plate spring steel.

35. (New) A telescopic shaft according to claim 32, wherein a surface hardness of said transferring-member-side contact portion is set higher than a surface hardness of a portion extending from said shaft-side contact portion to said biasing portion.

36. (New) A telescopic shaft according to claim 32, wherein said biasing portion is formed with holes for reducing a biasing force.

37. (New) A telescopic shaft according to claim 32, wherein a plate thickness of said transferring-member-side contact portion is set thicker than a plate thickness of a portion extending from said shaft-side contact portion to said biasing portion.

38. (New) A telescopic shaft according to claim 32, wherein said transferring-member-side contact portion has a surface formed substantially in a circular arch cross-sectional shape.

39. (New) A telescopic shaft according to claim 32, wherein said telescopic shaft is used for vehicle steering.